

## 11. CONCLUSIONS

The archaeological site of Neuse Levee was excavated during May and June of 1998. Fifty-eight square meters of soil were removed to depths ranging from .83 to 1.8 m. Over 11,500 artifacts were recovered, including 127 tools and 199 sherds. The earliest component was a Late Archaic riverside workshop with a diverse range of tools and substantial amounts of primary flaking debris, indicating that the site served as a lithic source workshop. The Woodland components resemble a temporary camp more than a workshop.

### NEUSE LEVEE STRATIGRAPHY

The culture-bearing strata rest on approximately 3.5 m of Early Holocene levee deposits, referred to as lithologic unit 1. Lithologic unit 1 is composed of sandy loam and is a highly developed Bt soil. Units 1 and 2 comprise a prehistoric natural levee, which contains sediments ranging in age from about 10,000 to 250 yr B.P. Unit 2 overlies an eroded upper surface of unit 1 and contains most of the cultural material at the site. Unit 3 is late prehistoric slackwater floodplain sediment that ranges from about 2000 to 250 yr B.P. Unit 4 is historic alluvium that forms the present natural levee along the Neuse River, and Unit 5 is historic gravel on the bed and bars of the Neuse River.

Although minor signs of stratigraphic disturbance were found in the Unit 2–3 cultural material, the site appears to be largely intact. For example, of the approximately 200 sherds, all but four were found in the upper 50% of the deposits; three of the remainder are between 50 and 70% depth. (Depths in this summary are discussed in terms of percent of depth from the surface to the eroded lithologic Unit 1–2 contact, upon which the Late Archaic horizon rested. The percent depth notation adjusts for the differences in stratum thickness from one part of the site to another so that everything is seen as though in the same depth/stratum location.) One sherd was found at 80–90% depth. Complementing the sherd distribution was the distribution of Late Archaic Savannah River points, which were confined to below 60% depth except for one specimen at 30–40% depth.

### CULTURAL STRATIGRAPHY

All technologies reflect a change of status of the cultural deposits at about 50–60% depth. Use of the local rhyolite-granite in quantity ended abruptly at 60% depth, while ceramic usage appeared at 50% depth. Interestingly, ceramics, after a promising initiation in the 50–60% depth, experienced a pause in frequency at the 40–50% depth. A parallel gap appears between 40–60% depth in points, with the use of Woodland points appearing above 40% depth.

From an environmental standpoint, the technological pause corresponds with the change from archaeological Stratum 2 to Stratum 3 at about 40–50% depth. Radiocarbon dating places this contact at about 2000 yr B.P., although cultural diagnostics suggest a somewhat older date. OCR determinations indicate a period of rapid sedimentation at that depth and an older date. The rapid sedimentation would imply an increase in flood volume providing for sediment laden water to overcap the levee more frequently, perhaps making it less habitable. Another possibility is that the “gap” is only apparent because increased sedimentation allowed a lower vertical density of artifacts within the context of a similar population presence.

The cultural occupations above and below 60% depth are distinct in every regard. The lower cultural strata (4–5) occupations are focused on use of local lithic material. A wide variety of tools scattered

evenly over the site implies a workshop area with some amount of specialization of activities. In addition to a component of Savannah River points that appear in functionally complementary sizes and shapes—one small, thin, and sharp, the other large, thick, and blunt—other tools appear. Three morphologies of bihafted push planes were identified, as well as piercers, hafted drills, and hafted scrapers.

Through time, the assemblage of debitage suggests a shift from local to Piedmont raw material sources. Use of coarser local material also escalates during the late Late Archaic/Early Woodland and continues through the Late Woodland, although supplanted to some extent by quartz and imported cherts. Parallel trends in reduction strategies and flake fragmentation follow the changes in material types. Before the pause, primary and secondary flakes were important in the assemblage, but afterward they diminish in frequency in favor of tertiary flakes. Medial fragments, the most usable portion of flakes, become more frequent in the later periods.

Prominently, the transition is marked by the introduction of ceramics to the assemblage. Net-impressed wares appear in an early ceramic level. This, however, is immediately before or during the pause in occupation debris. After the pause, fabric impression is the dominant mode of surface treatment, which seems to suggest that the Early Woodland was already under way before the pause, or perhaps more accurately, the introduction of ceramics to the Fall Line region. It is unclear whether occupation of the site was reduced during the pause, or the rapid deposition created an apparent pause, or some combination of the two.

Perhaps the most illuminating finding of the study of ceramics and lithic materials is that the focus of external relations seems to have shifted from the Coastal Plain to the Piedmont during the Early Woodland. This shift might have started during the late Late Archaic, although this possibility is based largely on negative evidence, i.e., low preferences for chert and black rhyolite from the Piedmont and increasing use of local coarse material. However, the net-impressed Deep Creek ware in the Early Woodland levels indicates a connection to the Coastal Plain. Sometime in the Early Woodland the focus of external relations clearly shifted from Coastal Plain to the Piedmont, as evidenced by the increasing popularity of chert and black rhyolite, and a Yadkinization of the ceramics toward a crushed quartz, fabric-impressed ware. The fabric impressions are generally of a fine fabric, but over time coarser fabric was added and later de-emphasized.

This apparent shift of technologies during the Early Woodland also corresponds to the shift in settlement pattern on the Coastal Plain from small sites on small tributaries to large sites on larger tributaries, as noted by Phelps (1983) and Herbert (1996), and on Wakefield Creek to a similar de-emphasis on hunting at the forest edge at site 31WA1390 (Gunn et al. 1998).

## **SEDIMENTARY SEQUENCE**

### **Early and Middle Holocene**

In a broader perspective, the ultimate research implications of Neuse Levee in the context of the Atlantic Slope and the Southeast are potentially significant from the earliest parts of its sediment record. The site rests on a thick sediment body that was deposited, apparently rather rapidly, in the Early Holocene between 7,000 and 10,000 years ago. Although this corresponds in time to the generally recognized episode of rapid sedimentation on the Atlantic Slope (Cable 1996), additional geomorphic analysis and correlation will be necessary to establish whether the Neuse Levee episode corresponds in regional sedimentation processes or was simply a function of local river meandering. Cable describes the laying down of the Early Holocene sands at the Haw River Sites: “These sands accumulated as a result of overbank flooding, beginning with the onset of increased stream flow at the Late Glacial/Early Holocene boundary” (Cable 1996; Larson 1982:109; Larson and Schuldenrein 1990:167). He also notes that the sands were deposited on an eroded lacustrine surface that probably represents the Clovis and Pre-Clovis

age range. Later in the discussion of cultural strata, Cable notes that one of the occupation surfaces in the sand/lamella couplets contained a mix of Kirk, Bifurcates, and Stanly (lamella 7/6, p. 113). This is interpreted to mean that there was an early Middle Holocene suspension of overbank flooding, which resumed in the Middle Holocene and resulted in an isolated Stanly/Morrow Mountain horizon (lamella 5/4, p. 113). As Stanly appears both above and below the hiatus, the increased deposition must have been during Stanly times.

The character and distribution of Early Holocene sands bear on what we can say about the likelihood of finding Paleoindian and Early Archaic deposits in this and other sites along the Neuse River. Was there a sudden surge of deposition in the basin in which we find Neuse Levee, and what does that have to do with erosion of uplands at that time? Would such a surge, followed by suspension of sedimentation, help explain the remarkable uniformity and advanced age of the Bt? Can we expect a regional hiatus in deposition before the beginning of the deposition in which the Savannah River horizon is deposited? Is the depth of the Bt basin locally or regionally related? Will the Paleoindian deposits below the Fall Line always be more than 4.5 m down as they would have been at Neuse Levee? Are there places we can find them at more obtainable depths?

Widespread evidence for extreme drought conditions across the southern United States at least from the Southern Plains to Florida in the early half of the 9500–10,000 B.P. date range. Similar evidence has been observed in the northern Great Basin and tied to the May–June insolation maximum (Davis 1984). In Maryland–Delaware, a similar drought condition has been identified, although more likely correlated with the June–July insolation rather than the May–June (Kellogg and Custer 1994; Millis et al. 1998). Could similar droughty conditions between these points in the Fall Line environ of North Carolina have precipitated a Pleistocene–Holocene transition increase in deposition, perhaps of unusual magnitude?

The topographic situation at Neuse Levee is in many ways similar to that of the Haw River sites. According to Larson and Schuldenrein (1990:164), the Haw River sites have about 2 m of sediments. They are located near the Fall Line, which dictates similar general sedimentation environments. The Haw River sites are located in a sedimentation basin between two bands of resistant rock that restrict the flow of water during floods and create slackwater conditions that encourage floodplain and levee formation.

At Neuse Levee, similar conditions are apparent. The sediment basin is 1.2 km long and 1.0 km wide at its widest point. The stream channel is extremely contorted in the basin, evidencing excessive sediment load borne by the stream within the confines of the basin.

Larson and Schuldenrein (1990:167) believe the Haw was downcut in the Pleistocene, after the last interglacial sea level highs created a 15.2–22.9-m terrace, which was downcut. The new sediments containing artifacts as old as Paleoindian and dating to the Terminal (Latest?) Pleistocene were as much as 2.2 m deep. Prolific Archaic-age artifacts were associated with reddish brown bands called lamellae. Petrographic examination of lamellae in the Neuse Levee deposits showed them to be illuvial iron accretions.

### **Late Holocene**

As is typical of many sites, the later Holocene landforms at Neuse Levee were deposited at a much slower rate. The building of landforms broadly in equilibrium with the climate and hydrological circumstances of their climatic episode dictates that in the long term they will be built higher and therefore will become less accessible to all but the most extreme floods. Under these circumstances, changes in rates of deposition on the tops of landforms such as levees become of special interest because they could signal a change in the flood regime that implies more frequent and/or more depositionally rich floods. At Neuse Levee, a pause in the rate of artifact discard appears around the change from the Archaic to the Woodland. This could be due to a reduction in visits to the sites for other reasons. However, a close array of OCR dates seems to suggest that the pause was in part due to increased deposition rates.

## Historic Period

During the historic era, the rates of deposition were very high. A whole new levee facies was added to the existing prehistoric levee. This correlates with similar findings on Richland Creek and Wakefield Creek. On Wakefield Creek, the effects of European agricultural practices were so extreme they produced the movement of a large part of the sediment load in the 1700s, probably in a single cataclysmic event producing what is called a “gravel ramp.” The historic levee at 31WA1137 was probably produced as a part of this general movement of large sediment loads onto lowland settings.

## SUMMARIES OF SPECIAL STUDIES

In this study we have attempted to use the whole of the landscape to inform interpretation of Neuse Levee as part of a series of archaeological sites from riverside to ridgetop. Using a topographic and geomorphic overview of the Neuse Levee and the sites on Wakefield Creek (a toposequence), several important insights were gained into the hypothesis that the Archaic to Woodland transition involved a reorientation of settlement patterns from uplands to lowlands. Clearly uplands and lowlands were utilized in both periods. The structure of that usage shifted, however. Because it is one of the rare Archaic-age floodplain sites, Neuse Levee will be important in regional understanding of Late Archaic floodplain settlements.

Neuse Levee seems to have been used as a lithic resource area in the Archaic. The wide range of lithic tool types and their unique configuration suggests unusual potential uses. The combination of small planing, piercing, scraping, and drilling implements and their riverine context suggest to us that they might have been used in building watercraft or some other similarly complex task involving the compositing of a number of materials. Although we know of no suitable bark in the area of present vegetation, the skins of large animals might be appropriate for building water craft. Sinews of such animals could also have been important. The wood burning, should it have been associated with the camp, might have been used in preparing canoe ribs or other structural members.

Ceramics in the Woodland levels imply more general use, perhaps fish processing, as suggested by elevated phosphorus readings. In the Wakefield Creek watershed, fishing probably played a role in the lower part of the drainage at Red Hawk Run (31WA1376), again based on high phosphorus measurements, but something else was pursued at 31WA1380: perhaps mast was processed and/or stored in thick-walled ceramics during the Woodland. The middle reaches seem to have been used for hunting on the riparian–upland vegetation zone transition. At 31WA1390 numerous broken biface tips from the early phase of the Early Woodland signal something rigorous, perhaps butchering; this would be expected on the riparian-upland vegetation zone transition. Except for hickory nut shells in the features, no evidence is apparent at Neuse Levee for any of the up-valley functions observed on Wakefield Creek.

### *Organic- (Non–Calcium-) Based Analyses*

Archaeologists typically focus on calcium content of sites, whether from bones, shell, or chemical residue. Easily identifiable evidence of life systems such as shell and bone are the usual leads to the animal collecting habits of prehistoric inhabitants. These leads, however, are susceptible to dissolution in acidic soils. This is particularly true in older sites such as the 2,000- to 3,000-year-old components at Neuse Levee. Scarry and Scarry’s (1997) research on archaeobotanical and zooarchaeological materials recovered in North Carolina shows only one site with archaeobotanical remains earlier than the Middle Woodland, although mammals such as deer and opossum are fairly common. The basic soil conditions of coastal zone shell middens have preserved most of these specimens.

Although less inherently visible, other organic substances are known to be more resistant to dispersion in the soil environment. These include more traditionally used nutrient components from decayed organic

tissues, such as phosphorus, which collects in clay lattices. These components can reside in the soil for long periods of time.

Also of importance are silica phytoliths. Phytoliths are the accumulated cell metabolism waste that remains after the carbon-based components disintegrate. Because they form within living plant cells, they take on some of the shape attributes of the cells and thus provide indications of plant taxa. An advantage of phytoliths is that they have a much greater size range than pollen grains, also a traditional indicator of past environments. Pollen grains' role in plant reproduction requires that they be dispersed by winds or insects; thus, pollen grains are typically appropriate sizes (aerosols) to be wind-borne. The consequence of this dispersion method is that pollen sampled from a site is typically not from the site. Because phytoliths range into sizes too large to be wind-borne, they can represent the vegetation from on-site or near-site conditions.

In future archaeological projects, and perhaps in future studies of the Neuse Levee sherds, it might be productive to study the soot and lipid residue on sherds. Biochemical and phytolith studies could yield extremely informative information.

### *Geochemical Analysis*

As at Red Hawk Run (31WA1376), the most productive geochemical analysis was phosphorus. The location of the site adjacent to the Neuse River suggested during the project planning stage that it might have been used as a fishing station. In prehistoric and early historic times large runs of anadromous fish such as shad flooded into North Carolina streams in the spring to spawn. This would have been particularly true landward from the embayed section of the North Carolina coast, which provides excellent transitional habitat for ocean-going, inland-spawning fish. As in other parts of the world, such as the northwest coast of North America, such fish provided a rich resource that sustained elaborate social organizations. In the opinion of fish experts (V. Schneider, personal communication 1997), the fish would not have been able to travel upriver beyond the Falls of the Neuse 8 km upstream in dry years. Such a condition would have converged with great need for food in the spring by Piedmont populations, who would have been placed in precarious subsistence conditions by drought. All of this suggests that at least occasional, and probably regular trips would have been made to the Falls of the Neuse area in the spring to harvest a rich and reliable source of protein and fat.

In the case of Neuse Levee this is particularly suggestive in terms of the Woodland shift of orientation from Coastal Plain to Piedmont. The high Piedmont between the Fall Line and the Yadkin River seems, based on currently available evidence (Dickens et al. 1987; Eastman, personal communication 1998), to not have been occupied during the Early Woodland. However, as the Piedmont became occupied during the Middle and Late Woodland, so the orientation at Neuse Levee shifted from its Archaic–Early Woodland Coastal Plain roots to its Late Woodland Piedmont derivative. This suggests that occupation of the Piedmont required control of the Fall Line for survival in droughty years when the produce of the Piedmont was too limited to maintain living standards by horticulture alone. Whether this control was maintained through kinship, political, or military means remains to be investigated.

### *Phytoliths*

A broadening range of phytolith analyses along the Atlantic Slope forms the basis for regional and local testing of habitats and effects of humans on vegetation (Rovner 1998). At the three Wakefield Creek sites, phytoliths provided a much-extended perspective on phytolith potential in such environments. Particularly noteworthy are items of information such as that the proposed feature at 31WA1380 was in an opening in the canopy. This could suggest, among other things, clearing of the immediate trees for firewood, or fire damage to the overstory vegetation. Additional information from important locations such as block B at 31WA1390 emerged from the presence of microscopic carbon particles found in the phytolith samples. The presence of these microcarbon specimens adds a different perspective on the

presence of biface tips. It suggests both rigorous use of bifaces, for tasks such as butchering, that resulted in their breakage and fire-related activity, either cooking or heating.

### *Ethnobotany*

A few bits of carbon recovered from features at Neuse Levee added one bit of information to our understanding of the Archaic occupation. Most of the features contained both fuel and food remains. Whether the food remains (hickory nuts) represent mast processing or incidental inclusion is not known. A hickory nut shell was encountered in an auger hole 4.5 m below the surface on the basal gravels and dated to 10,160 B.P. Organic remains recovered from level sediments and dated to around 3800 B.P. were mostly pine, but hickory nut shell was also found in this context. Pine could have been used to make “pitch smoke” to repel mosquitoes, or used in construction.

### *Cultural Features*

Neuse Levee features were identified in the field as concentrations of burned rock, two small rock clusters, and a small pit. In laboratory analysis, features were found by flotation to contain carbon particles in flotation. It is suspected that the burned rock features were at least in part food-related because of the nut shells, but could have been used in other ways to support camp manufacturing processes. The Neuse Levee rock features were much less substantial than those in the Wakefield Creek Early Woodland components, and contained no large rocks suggestive of vessel stands.

### *Lithics, Ceramics, and FCR*

Activities areas were clearly identifiable in the Archaic levels through a unique tool kit. It consisted of a complex combination of tools that were probably used to work wood and probably other materials as well. It seems likely that the construction involved compositing a number of materials, perhaps into watercraft. After what appears to have been a very intense episode of this activity, perhaps one or a few visits, much less lithic waste was generated and the tools complex was reduced to points and utilized flakes. Lithic material types, fragmentation, and reduction stages suggest only transient occupations.

Over time the ceramic vessels in the Woodland levels were thickened and provided with larger temper. This is a generally recognized trend from the Early to Middle Woodland, and could represent a change of emphasis from cooking vessels to storage. However, the opposite trend has been noted in the Coastal Plain (Phelps 1983). Given the riverside location of Neuse Levee, one could also suggest vessels used in river transportation of bulk food commodities (Nassaney and Sassaman 1995). These foods could have been botanical in origin. However, it is possible that it was easier to catch anadromous fish at the Falls of the Neuse than in the open and wide rivers of the Coastal Plain, and that fish and fish products were being transported downstream past Neuse Levee. The vessels could have been broken during brief stopovers. A high incidence of rims and low incidence of bases was observed at Neuse Levee as compared to the Wakefield Creek sites. This finding is taken to reflect the transient nature of the Woodland camps, as the rims could be easily broken but not render the vessel unusable; the bases, less likely to be broken, would be found in more permanent sites where long-term use of vessels would result in their ultimate fracture and discard.

## **RESEARCH QUESTION CONCLUSIONS**

The research questions for the excavations were organized into six domains: chronology, environment, material culture, subsistence, seasonality, and settlement.

## *Chronology*

One of the objectives of the project was to develop fine-grained or sub-period insights into the chronology of the region. Because of the time spans registered in the site, most chronological concern was focused on the Late Archaic and Woodland. No evidence of Middle Archaic occupation was found at the site, as had been expected. The meaning and function of crude bifaces commonly classified as “Guilford,” however, were greatly clarified. They were, at least in the Late Archaic, part of a broader tool kit assemblage. It is an interesting question as to whether this trend was carried forward from the Middle Archaic.

The Early Woodland components at Neuse Levee do not provide an unambiguous answer to the question of the Early Woodland affiliation of the site because of the obscure relationships between Yadkin and Deep Creek ceramics. The apparently Early Woodland net-impressed ceramics at Neuse Levee match the type profile of Deep Creek in temper, thickness, and exterior treatment, although no cord-marked sherds (the hallmark of the series) were found.

The most important sub-period insight to emerge from the Neuse Levee strata is the Early Woodland pause accompanied by increased sedimentation in the site. The period of reduced artifact density between the Archaic and Woodland, or perhaps during the early phase of the Early Woodland, raises questions of some temporal duration in the archaeological literature of the region. The question of an Archaic–Woodland hiatus is long-standing and seemed to be discounted by Claggett and Cable’s (1982) work on the Haw River. However, the stratigraphy at Neuse Levee and at 31WA1380 (Gunn et al. 1998) deserves consideration in this matter as well. Fiedel (1997) has suggested that there is evidence for an early first millennium B.C. population decline or collapse in the Northeast, which could have affected North Carolina Fall Line region as well. It corresponds to a climatic episode involving worldwide cooling and drying of environments (Gunn 1994c). Possibly, the proposed early onset of bow and arrow use in this region (see Woodall 1996) stemmed from some environmental trauma that made this technology more advantageous than the atlatl and dart. The appearance of small, slightly side-notched points (Eared Yadkin) in the middle first millennium B.C. could have followed experiments with small stemmed, notched, lanceolate, etc., points observed at Haw River and Wakefield Creek.

The Early Woodland presence at Neuse Levee is barely visible and does not compare in clarity with those in Wakefield Creek sites at the same time. On the other hand, no Late Woodland component was detected on Wakefield Creek, while it is clearly present, if ephemeral, at Neuse Levee. The shift in settlement pattern, so far as it can be detected from known sites in the Neuse Fall Line region, could have involved some use of the broken terrain around the Falls of the Neuse during the Early Woodland, possibly because of a more fishing- and hunting-oriented subsistence regime. A shift to fishing and farming in the Late Woodland focused attention on the flat, broad floodplains below the Fall Line and the less dissected areas of the Piedmont. Parallel developments have been observed in the Fall Line region at the Great Falls of the Potomac (Washington, D.C.).

At Neuse Levee, lithic material, flake reduction stage and flake fragmentation signals a shift from on-site to off-site sources and activity, and sedentary-to-mobile context, from the Archaic to the Late Woodland.

### *Intensity of Human Presence at Sites on or Overlooking the Neuse Fall Line*

The occupation of the Neuse Fall Line archaeological sites varied with topographic position through time (Table 11.1). On a transect from the Neuse River floodplain to the ridgetop at Wakefield School, five sites have been intensively studied. Neuse Levee attracted one of the greatest temporal range of visitors of any of the five sites. Beginning about 3000 B.C., human presence on the levee was conspicuous. Neuse Levee and Red Hawk Run (31WA1376), near the confluence of Wakefield Creek and the Neuse River, were occupied during the Early Woodland as people turned to fishing for a greater part of their diet. Site 31WA1390 was probably a hunting station at the edge of the river vegetation zone. It was utilized during the Middle Archaic and in early years of the Early Woodland, when hunting was

apparently an important aspect of food acquisition, but seems to have been abandoned in the years following, which corresponds to Phelps's (1983) observation of site abandonment during the Early Woodland on the Coastal Plain. Site 31WA1380, protected by the upper valley wall, was the site of greatest enduring interest along Wakefield Creek; it was occupied in the Middle and Late Archaic by both Eared Yadkin (mid-first millenium B.C.) and Wakefield point people (late first millenium B.C.–A.D.500). Site 31WA1387, exposed on top of the ridge, was of interest during the Early and Middle Archaic, but not during subsequent periods. Why people preferred the ridgetop has been explored elsewhere (Gunn and Foss 1992; Gunn and Wilson 1993; Mouer 1991). A more terrestrially oriented Middle Archaic subsistence regime directed toward forest edge hunting and gathering of forest mast crops seems to have been at least in part responsible.

**Table 11.1. Occupation Intensity of Middle Neuse Sites.**

Period/Point Type	Start Date	31WA1137 Floodplain	31WA1376 Low	31WA1390 Medium	31WA1380 High	31WA1387 Ridge
L. Woodland Small Triangular	A.D. 1000	XX	—			
E. Woodland Wakefield	300 B.C.		X		X	
E. Woodland Eared Yadkin	500 B.C.	X	X	X	X	
E. Woodland Yadkin	500 B.C.	X				
L. Archaic Savannah River	2500 B.C.	XX	—			
M. Archaic Guilford	3500 B.C.				X	X
M. Archaic Morrow Mt.	5500 B.C.			X	X	X
E. Archaic Bifurcate	7000 B.C.					—
Paleoindian Hardaway	9000 B.C.		—			

Presence as: — = slight, X = present, XX = strongly present

### *Environment*

The riverside depositional environment at Neuse Levee somewhat obscures relationships to regional environment because of channel shifts reworking the deposits. It would appear that, like at Haw River and other southeastern sites, an increase in runoff and less stable uplands filling of the floodplain began in the Early Holocene. After 7,000 years ago the levee was eroded, although it is unclear if that was due to climate or channel shifts. Deposition recommenced about 5,000 years ago. Again, it is unclear if the redeposition, on the main, was due to channel shifts or changes in climate context. It is possible that Late Holocene floods of greater depth allowed overflowing of the levee and thus resumption of deposition on the levee crest. Periods of rapid deposition at around A.D. 1100 and some time in the early first millennium B.C. appear to be particularly notable in this regard. Increased deposition or channel shifting could have obscured the locally available rhyolite/granite cobbles from the river, accounting in part for shifting preferences in lithic sources by inhabitants of the site.

### *Material Culture*

Lithics at Neuse Levee revealed both an unusual Late Archaic tool kit and a shift of lithic materials sources between the Late Archaic and the Woodland. The Late Archaic tool kit appears to be very complex and perhaps unprecedented in composition compared to previous observation. It is composed of a complex of points of varying sizes and morphologies suggesting functional variants of the Savannah River type. Accompanying the points were planes, drills, piercers, scrapers, and flake choppers. Possibly the tool kit was used for some sort of composited construction such as house or, more likely given the location, watercraft manufacture. The Woodland lithics are the more usual complement of points and flake tools.

The ceramics associated with Neuse Levee appear to be Deep Creek and then Yadkin series. The Yadkin ceramics at the Wakefield Creek sites seem to bear a relationship to Roanoke River valley ceramics as much as to those of the Yadkin River (Gunn et al. 1998). This relationship is based on sandier temper, favored over grit. Ceramics and points as well (Wakefield/Piscataway in the Wakefield Creek sites)



support a northward-looking technology during the late Early Woodland. All of this evidence seems to bear the mark of a fishing-oriented influence or intrusion from the Chesapeake Bay area. To this can be added the early net-impressed ceramics at Neuse Levee, net impression being the *sine qua non* of Virginia ceramic traditions.

### *Subsistence*

Subsistence information from Neuse Levee is sparse, perhaps because of nature of the site. Evidence of Archaic subsistence is limited to hickory nut shell, and the extensive tool kit suggests that the site might have served other purposes than production and/or consumption of food. Elevated phosphorus in the upper stratum could indicate fish processing in the Late Woodland.

### *Seasonality and Settlement*

As at the Wakefield Creek sites, direct evidence of seasonality of use is elusive. Because Late Archaic and Woodland subsistence is thought to have been posited on advance storage technology, the presence of nut remains does not imply a summer-to-fall occupation. The phosphates could signal spring harvests of anadromous fish, but fishing in one form or another would have been possible in the Neuse at any time of the year.

In summary, some information on the occupation of the Neuse Levee during the Late Archaic and Woodland has been gained. During the Early Woodland a shift in technological emphasis diminished use of local material and increased reliance on imported lithics. Pre-Woodland occupations seem to have focused on wood-oriented workshop activities, possibly related to water transportation (e.g., making canoes of skin or bark). Woodland activities seem to have been domestic and subsistence related, perhaps fishing.

## **LATE ARCHAIC TO LATE WOODLAND SCENARIO**

A possible summary scenario for occupation of the Neuse Fall Line region might be as follows. Around the turn of the first millennium B.C., the region was occupied by groups using net-impressed ceramics and small stemmed points, perhaps related to the Deep Creek culture of the Coastal Plain. Some sort of disruption followed in the early part of the first millennium B.C., perhaps a local manifestation of the population reduction noted in the Northeast, and a global temperature downturn.

About the middle of the first millennium B.C., a Woodland group, using Eared Yadkin points, appeared at both Wakefield Creek and Neuse Levee. These points are also known to the south in Georgia and suggest that the culture had its focus in the southern Piedmont. Further support for this concept can be seen in the appearance of simple stamped Yadkin ceramics at Doerschuk, which are thought to also have a southern origin.

Probably late in the first millennium B.C., another influence appeared from the Chesapeake Bay area. They had Wakefield points, a variant of the Virginia–Maryland Piscataway point. They seem to have hunted less at the riparian–valley wall vegetation transition, and probably focused more on fishing. There was a general movement toward settlements on floodplains of large streams.

At some time during the first millennium A.D., attention turned away from the Falls of the Neuse and toward broad floodplains. The only evidence of Late Woodland occupations on Wakefield Creek is an occasional surface find of small triangular points at low elevations as at Red Hawk Run. At Neuse Levee, the strongest expression of Woodland is Late Woodland with both ceramics and points in context. The component is so ephemeral, however, that it is probably a waystation, either terrestrial or waterborne, en route to a more substantial, and as yet unrecognized, site elsewhere.